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(71) Applicant: Radio Frequency Systems Inc.  
Marlboro, NJ 07746-1899 (US)

(72) Inventor: Marino, Ronald A.  
Burlington, New Jersey 08016 (US)

(74) Representative: Döring, Roger, Dipl.-Ing.  
Alcatel,  
Intellectual Property Department,  
Kabelkamp 20  
30179 Hannover (DE)

### (54) Broadband fixed-radius slot antenna arrangement

(57) A fixed radius tapered slot antenna (100) formed a dielectric substrate (10) with an electrically conductive layer (14) on one side. The slot is defined by two hemispherical shaped elements (12, 13). A common base (15) is also formed on the conductive layer behind the hemispherical shaped members. Preferably, a microstrip feedline (16) is formed on the side of the dielectric substrate to electromagnetically couple to the balun (18) adjacent the narrow end of the tapered slot. A contiguous array of fixed radius tapered slot antennas (100) can be made on the same conductive layer of a dielectric layer. A reflector can be integrated with the antenna array to improve the radiation pattern. The fixed radius tapered slot antenna has been proven to out-perform an exponentially tapered slot or Vivaldi antenna.

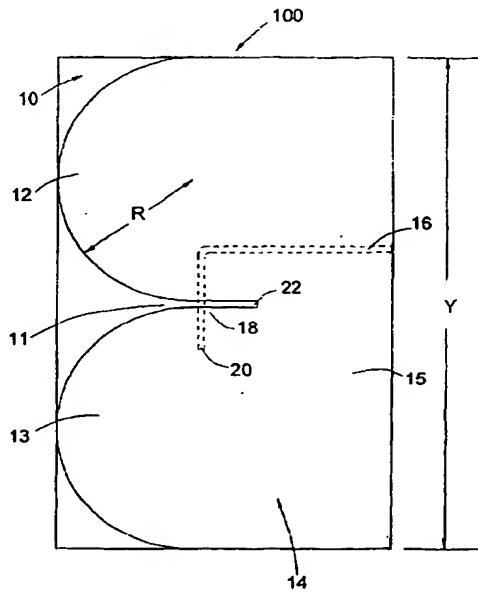


FIG.3



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## EUROPEAN SEARCH REPORT

Application Number  
EP 99 40 2781

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<p>The present search report has been drawn up for all claims</p> <table border="1"> <tr> <td>Place of search</td> <td>Date of completion of the search</td> <td>Examiner</td> </tr> <tr> <td>THE HAGUE</td> <td>7 August 2001</td> <td>Van Dooren, G</td> </tr> </table> <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>				Place of search	Date of completion of the search	Examiner	THE HAGUE	7 August 2001	Van Dooren, G
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THE HAGUE	7 August 2001	Van Dooren, G							

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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